

Q.1) Which of the following are the goods and services provided by ecosystems?

1. Provision of food, fuel and fiber
2. Purification of air and water
3. Pollination of plants, including many crops Control of pests and diseases
4. Cultural and aesthetic benefits

Select the correct answer using the codes given below.

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3 and 4 only
- d) All the above

Q.1) Solution (d)

Goods and Services provided by ecosystems include:

- Provision of food, fuel and fiber.
- Provision of shelter and building materials.
- Purification of air and water.
- Detoxification and decomposition of wastes.
- Stabilization and moderation of the Earth's climate.
- Moderation of floods, droughts, temperature extremes and the forces of wind.
- Generation and renewal of soil fertility, including nutrient cycling.
- Pollination of plants, including many crops Control of pests and disease.
- Maintenance of genetic resources as key inputs to crop varieties and livestock breeds, medicines, and other products.
- Cultural and aesthetic benefits.

Do you know?

- The concept of **ecological debt** was coined by southern NGOs at the beginning of the 1990s. It usually refers to the ecological damage caused by industrialized countries to the southern hemisphere and/or to the use of ecosystem services at the expense of southern-hemisphere countries. Currently, several NGO networks from north and south are campaigning for the recognition of the concept.

THINK!

- Environmentalism

Q.2) Which of the following of a species best describes, how an organism or population responds to the distribution of resources and competitors, and how it in turn alters those same factors for its survival?

- a) Ecotone
- b) Ecology
- c) Ecological niche
- d) Edge effect

Q.2) Solution (c)

An **ecological niche** describes how an organism or population responds to the distribution of resources and competitors (for example, by growing when resources are abundant, and when predators, parasites and pathogens are scarce) and how it in turn alters those same factors (for example, limiting access to resources by other organisms, acting as a food source for predators and a consumer of prey).

Do you know?

- Niche plays an important role in conservation of organisms. If we have to conserve species in its native habitat we should have knowledge about the niche requirements of the species and should ensure that all requirements of its niche are fulfilled.

THINK!

- Ecocline

Q.3) Consider the following statements about the biosphere.

1. The energy required for the life within the biosphere comes from the air, water and soil.
2. The nutrients necessary for living organisms come from the sun.
3. Living organisms are uniformly distributed throughout the biosphere.

Select the correct answer using the codes given below.

- a) 1 and 3 only
- b) 1 only
- c) 2 and 3 only
- d) None

Q.3) Solution (d)

The energy required for the life within the biosphere **comes from the sun**. The nutrients necessary for living organisms come **from air, water and soil**. The same chemicals are recycled over and over again for life to continue.

Living organisms are **not uniformly distributed throughout the biosphere**. Only a few organisms live in the polar regions, while the tropical rain forests have an exceedingly rich diversity of plants and animals.

Do you know?

- The climate determines the boundaries of a biome and abundance of plants and animals found in each one of them. The most important climatic factors are **temperature and precipitation**.

THINK!

- Aquatic zones.

Q.4) Consider the following statements about the energy flow among different trophic levels.

1. The flow of energy from producer to top consumers is called energy flow which is bidirectional.
2. The pyramid of energy is always upward, with a large energy base at the bottom.
3. Biomass pyramid concept helps to explain the phenomenon of biological magnification.

Which of the above statements is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 only
- d) 3 only

Q.4) Solution (c)

Energy is the basic force responsible for all metabolic activities. The flow of energy from producer to top consumers is called **energy flow which is unidirectional**.

An energy pyramid, reflects the laws of thermodynamics, with conversion of solar energy to chemical energy and heat energy at each trophic level and with loss of energy being depicted at each transfer to another trophic level. Hence the pyramid is always upward, with a large energy base at the bottom.

Energy pyramid concept helps to explain the phenomenon of **biological magnification** the tendency for toxic substances to increase in concentration progressively at higher levels of the food chain

Do you know?

- In **bioaccumulation** there is an increase in concentration of a pollutant from the environment to the first organism in a food chain.

THINK!

- Biomagnification.

Q.5) Biomagnification refers to the tendency of pollutants to concentrate as they move from one trophic level to the next. Consider the following statements.

1. In biomagnification there is an increase in concentration of a pollutant from one link in a food chain to another.
2. In order for biomagnification to occur, the pollutant must be long-lived, mobile, soluble in water and biologically inactive.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None

Q.5) Solution (a)

Biomagnification refers to the tendency of pollutants to concentrate as they move from one trophic level to the next. Thus, in biomagnification there is an increase in concentration of a pollutant from one link in a food chain to another.

In order for biomagnification to occur, the pollutant must be: **long-lived, mobile, soluble in fats, biologically active.**

If a pollutant is short-lived, it will be broken, down before it can become dangerous. If it is not mobile, it will stay in one place and is unlikely to be taken up by organisms. If the pollutant is soluble in water, it will be excreted by the organism. Pollutants that dissolve in fats, however, may be retained for a long time.

Do you know?

- If a pollutant is not active biologically, it may biomagnify, but we really don't worry about it much, since it probably won't cause any problems Examples: DDT.

THINK!

- Bio geo chemical cycle.

Q.6) Consider the following pair of biotic interactions.

Type of interaction	Result
1. Mutualism	There is no net benefit or harm to either species
2. Amensalism	One species is harmed, the other is unaffected
3. Neutralism	Both species benefit.

Which of the above pairs is/are correct?

- 1 and 2 only
- 1 and 3 only
- 2 only
- 3 only

Q.6) Solution (c)

Mutualism: both species benefit.

Example: in pollination mutualisms, the pollinator gets food (pollen, nectar), and the plant has its pollen transferred to other flowers for cross-fertilization (reproduction).

Commensalism: one species benefits, the other is unaffected.

Example: cow dung provides food and shelter to dung beetles. The beetles have no effect on the cows.

Competition: both species are harmed by the interaction.

Example: if two species eat the same food, and there isn't enough for both, both may have access to less food than they would if alone. They both suffer a shortage of food

Predation and parasitism: one species benefits, the other is harmed.

Example: predation-one fish kills and eats parasitism: tick gains benefit by sucking blood; host is harmed by losing blood.

Amensalism: One species is harmed, the other is unaffected.

Example: A large tree shades a small plant, retarding the growth of the small plant. The small plant has no effect on the large tree.

Neutralism: There is no net benefit or harm to either species.

Do you know?

- **Succession** is characterized by the following: increased productivity, the shift of nutrients from the reservoirs, increased diversity of organisms with increased niche development, and gradual increase in the complexity of food webs.

THINK!

- Autogenic and Allogenic succession.

Q.7) Consider the following regarding types of corals:

1. Fringing reefs: reefs that grow close to the shore and extend out into the sea like a submerged platform.
2. Barrier reef: reefs separated from the land by wide expanses of water and follow the coastline.
3. Atolls: a roughly circular ring of reefs surrounding a lagoon, a low lying island, common in the Indian and South Pacific oceans.

Which of the above is/are correct?

- a) 1 and 2
- b) 2 only
- c) 2 and 3
- d) 1, 2 and 3

Q.7) Solution (d)

Coral reefs are shallow water, tropical marine ecosystems which are characterized by a remarkably high biomass production and a rich faunal and floral diversity perhaps unequalled by any other habitat. Corals require certain conditions to occur and can flourish only in relatively shallow waters, exposed to direct sunlight, with optimum temperature of 23-25°C and free from suspended sediments.

The structure of a reef is formed by the calcareous skeleton that houses corals, a type of soft-bodied, radially symmetrical, marine invertebrates of the phylum coelenterate. Individuals of a colony are called polyps or hydroids. Millions of coral skeletons cemented together over a period ranging from a few thousand to millions of years give rise to such

reefs. Reefs can vary enormously in structure and complexity and are roughly divided into three major types.

1. Fringing reefs', reefs that grow close to the shore and extend out into the sea like a submerged platform.
2. Barrier reef: reefs separated from the land by wide expanses of water and follow the coastline.
3. Atolls: a roughly circular ring of reefs surrounding a lagoon, a low lying island, common in the Indian and South pacific oceans.

Do you know?

- The absence of reef in the Bay of Bengal is attributed to the immense quantity of freshwater and silt brought by the rivers. Other disincentives to reef growth are the heavy monsoonal rains and the high human presence on the coastline.
- The mainland coast of India has two widely separated area's containing reefs: The Gulf of Kutch in the North West, which has some of the most northerly reefs in the world and Palk Bay and the Gulf of Mannar (with numerous fringing reefs around small islands) in the south east.
- There are patches of reef in the inter-tidal areas of the central west coast of the country. Coral patches have been recorded in the intertidal regions of Ratnagiri, Malvan and Redi, south of Bombay and at the Gaveshani Bank, 100 Km west of Mangalore
- Important off shore island groups of India with extensive reef growth include the Andaman and Nicobar Islands in the Bay of Bengal and the Lakshadweep group of Islands in the Arabian sea. The Andaman and Nicobar islands have fringing reefs and a 320 km long barrier reef on the west coast. The Lakshadweep Islands are made up of atolls.

Q.8) Nayachar Island is a recently emerged riverine island. With 151 species it has become a rare case of ecology. In which of the following rivers does it occur?

- a) Ganga
- b) Hoogly
- c) Narmada
- d) Tungabhadra

Q.8) Solution (b)

Nayachar Island

- It is an emerged island in the middle estuary of the Hooghly River.
- It was created in the Indian Sundarbans (mangrove ecosystem) by river silt deposits.

News:

- Publication/Study by Zoological Survey of India (ZSI) has listed 151 animal species on the island, making it a rare case in ecology.
- The study is aimed at understanding soil stabilisation in an emerging island [and] the succession of living organisms in a new habitat.
- The natural succession of species on the island has been aided by the inundation of water during tides, and the soil brought from other places by fishermen
- A total of 27 species of fish and 37 species of birds have been recorded.
- The 104 islands of the Indian Sunderbans, both habited and uninhabited, are distributed in West Bengal's South 24 Parganas and North 24 Parganas districts.

THINK!

- Bhagirathi-Hooghly river system
- Farraka Barrage

Q.9) Consider the following statements regarding Bioindicators:

1. A bioindicator is a living organism that gives us an idea of the health of an ecosystem.
2. Only microorganisms act as bioindicators.

Which of the above statements are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.9) Solution (a)

Bioindicators

What is Bioindicator?

A bioindicator is a living organism that gives us an idea of the health of an ecosystem. Some organisms are very sensitive to pollution in their environment, so if pollutants are present, the organism may change its morphology-physiology or behaviour, or it could even die.

The information can be deduced through the study of:

1. their content of certain elements or compounds
2. their morphological or cellular structure
3. metabolic biochemical processes
4. behaviour
5. population structure(s)

Bioindicators can be plants, animals or microorganisms

- There are several types of plant and fungi biomonitors, including mosses, lichens, tree bark, bark pockets, tree rings, leaves, and fungi.
- Amphibians, particularly anurans which consist of frogs and toads, are increasingly used as bioindicators of contaminant accumulation in pollution studies.

THINK!

- Biosignature
- Ecological Indicator

Q.10) Bay of Bengal hosts a 'dead zone' of around 60,000 square kilometer. Which of the following statements correctly defines a dead zone?

- a) It is a region which is almost devoid of dissolved oxygen.
- b) It is a region where population of fish has become almost nil because of over fishing.
- c) It is a region where the population of predator exceeds the prey.
- d) It is a zone of dying coral reefs.

Q.10) Solution (a)

'Dead Zone'

The Bay of Bengal (BoB) hosts a 'dead zone' of around 60,000 square kilometers almost devoid of oxygen, a new multi-national study has shown.

- Less oxygen dissolved in the water is often referred to as a "dead zone" because most marine life either dies, or, if they are mobile such as fish, leave the area.

- There are many physical, chemical, and biological factors that combine to create dead zones, but nutrient pollution is the primary cause of those zones created by humans.
- Excess nutrients that run off land or are piped as wastewater into rivers and coasts can stimulate an overgrowth of algae, which then sinks and decomposes in the water.
- The decomposition process consumes oxygen and depletes the supply available to healthy marine life.
- Dead zones occur in many areas of the country, particularly along the East Coast, the Gulf of Mexico, and the Great Lakes, but there is no part of the country or the world that is immune. The second largest dead zone in the world is located in the U.S., in the northern Gulf of Mexico.
- Until now, there have been only three major identified dead zones – two in the eastern tropical Pacific (off Peru/Chile and Mexico) and one in the Arabian Sea. Bay of Bengal is the new in the list.

Q.11) The movement of vessels around the world requires the intake of ballast water to give them a safe degree of stability when light. The release of ballast water at the port is considered to be a big ecological hazard because:

- a) It increases the temperature of the coast by several degrees.
- b) It causes heavy metal poisoning.
- c) It is responsible for transporting alien species in new ecosystems.
- d) It reduces the dissolved oxygen in the ocean water.

Q.11) Solution (c)

Ecological impacts of Ballast water discharged in ports

- On return to ports the vessels discharge the ballast water in the coastal waters, thus releasing many exotic species of flora and fauna in the ecosystem
- Ballast water are transporting more than 10000 exotic marine species across the globe
- In India ,the experts have found more than 10 invasive exotic species in the coastal waters of Kerala which are very rich in bio diversity
- The increase in number of ports and expansion of port activities has aggravated the situation recently.
- Can cause tremendous damage to our coastal ecosystems and lead to severe loss of biodiversity

Q.12) The government has constituted a committee to investigate into illegal cultivation of HT cotton in four states. The HT of HT cotton stands for

- a) Hybrid transform
- b) Herbal treatment
- c) Herbicide tolerant
- d) High Tech

Q.12) Solution (c)

HT cotton stands for Herbicide tolerant.

The government has constituted a committee to investigate into illegal cultivation of HT cotton in four states.

The cultivation of BG-III or HT cotton has not been approved by Genetic Engineering Approval Committee (GEAC) of the Ministry of Environment.

There are several media reports and complaints regarding the illegal or unauthorised cultivation of HT cotton in Andhra Pradesh, Telangana, Gujarat and Maharashtra.

Q.13) Which of the following statements are correct regarding 'Blue Flag' certification?

- 1. It is given to cities which have taken stringent measures to curb air pollution.
- 2. It is a certification given by Foundation for Environmental Education (FEE).

Select the code from following:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.13) Solution (b)

Blue Flag Certification

Ministry of Environment and Forests launched a pilot project for beach cleanup and development, also striving for the "Blue Flag" Certification for such identified beaches

- **Objective** - Enhancing standards of cleanliness, upkeep and basic amenities at beaches

- Each of the coastal State/UT was requested to identify/nominate a beach, to be funded through the ongoing Integrated Coastal Management Programme.

Blue Flag

- The Blue Flag is a certification by the Foundation for Environmental Education (FEE) that a beach, marina or sustainable boating tourism operator meets its stringent standards.
- FEE's Blue Flag criteria include standards for water quality, safety, environmental education and information, the provision of services and general environmental management criteria.
- The Blue Flag is sought for beaches, marinas and sustainable boating tourism operators as an indication of their high environmental and quality standards.

THINK!

- Integrated Coastal Zone Management Project (ICZMP)

Q.14) A new species of night frog *Nyctibatrachus Mewasinghi* has been discovered. Where is it found?

- a) Sunderbans
- b) Western Ghats
- c) Nicobar Islands
- d) Meghalayan Plateau

Q.14) Solution (b)

Mewa Singh's Night frog

- *Nyctibatrachus mewasinghi* is a new species of night frog from Western Ghats.
- Scientists have just discovered the Mewa Singh's Night frog, belonging to a genus endemic to the Western Ghats, from Kozhikode's Malabar Wildlife Sanctuary.
- Frogs in the genus *Nyctibatrachus*, commonly known as night frogs, are found only in the Western Ghats mountain range.
- The frog's genetically closest relatives are the Athirappilly night frog (found south of the Palakkad Gap in Thrissur and Idukki) and the Kempholey night frog (found in the northern Western Ghats of Kerala and Karnataka).

Q.15) Photochemical smog is a mixture of pollutants that are formed when nitrogen oxides and volatile organic compounds (VOCs) react to sunlight. Consider the following about VOCs:

1. VOCs are produced from the evaporation of naturally-occurring compounds such as terpenes or eucalypts.
2. VOCs are formed from the incomplete combustion of fossil fuels, from the evaporation of solvents and fuels, and from burning plant matter.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.15) Solution (c)

Photochemical smog is a mixture of pollutants that are formed when nitrogen oxides and volatile organic compounds (VOCs) react to sunlight, creating a brown haze above cities. It tends to occur more often in summer, because that is when we have the most sunlight.

While nitrogen oxides and VOCs are produced biogenically (in nature), there are also major anthropogenic (man-made) emissions of both. Natural emissions tend to be spread over large areas, reducing their effects, but man-made emissions tend to be concentrated close to their source, such as a city.

Biogenic sources

In nature, bushfires, lightning and the microbial processes that occur in soil generate nitrogen oxides. VOCs are produced from the evaporation of naturally-occurring compounds, such as terpenes, which are the hydrocarbons in oils that make them burn. Eucalypts have also been found to release significant amounts of these compounds.

Anthropogenic sources

Nitrogen oxides are produced mainly from the combustion of fossil fuels, particularly in power stations and motor vehicles. VOCs are formed from the incomplete combustion of fossil fuels, from the evaporation of solvents and fuels, and from burning plant matter—such as backyard burning and wood-burning stoves.

THINK!

- Formation of Smog and Photochemical smog and their differences.

Q.16) Consider the following pairs with regard to aquatic ecosystem and identify the correct pair/s from the code given below:

Aquatic Organism : : Description

1. Benthos : : organisms that are found living in the bottom of the water mass
2. Nektons : : organisms which remain attached to stems and leaves of rooted plants and substances emerging above the bottom mud
3. Neustons : : groups which contains animals/organisms which are swimmers

Code:

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Q.16) Solution (a)

Neustons are unattached organisms which live at the air-water interface such as floating plants.

Periphytons are organisms which remain attached to stems and leaves of rooted plants and substances emerging above the bottom mud such as sessile algae and their associated group of animals.

Planktons includes both microscopic plants like algae (phytoplanktons) and animals like crustaceans and protozoans (zooplanktons) found in all aquatic ecosystems, except certain swift moving waters.

Nektons are groups which contains animals which are swimmers.

Benthos or benthic organisms are those found living in the bottom of the water mass.

Q.17) Which of the following statement is/are true with regard to Wetlands?

1. Sediments deposited by the rivers and river floodplains helps in the formation of wetlands.
2. Wetlands are found from the tundra to the tropics and on every continent.
3. Lakes are generally less important when compared to wetland from the viewpoint of ecosystem and biodiversity conservation.

Choose appropriate answer:

- a) 1 only
- b) 1 and 3 only
- c) 1 and 2 only
- d) All the above

Q.17) Solution (b)

Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season. Water saturation (hydrology) largely determines how the soil develops and the types of plant and animal communities living in and on the soil. Wetlands may support both aquatic and terrestrial species. The prolonged presence of water creates conditions that favor the growth of specially adapted plants (hydrophytes) and promote the development of characteristic wetland (hydric) soils.

Wetlands vary widely because of regional and local differences in soils, topography, climate, hydrology, water chemistry, vegetation and other factors, including human disturbance. Indeed, **wetlands are found from the tundra to the tropics and on every continent except Antarctica.**

Why wetlands are not found in Antarctica?

Only 0.4% of Antarctica is ice-free. Some of that has soil of a sort, but it's usually either dry or frozen. In some locations, however, there are very short-lived patches of wet soil, for example Schirmacher Oasis and Larsemann Hills.

However, these areas don't technically fit the definition of wetland because they lack the signature soils and vegetation of wetlands. The soil is too cold to develop hydric characteristics and the only vegetation is mosses, accompanied in photosynthesis by algae and cyanobacteria.

THINK!

- Characteristics of Wetlands
- Criteria for identification of Wetlands

Q.18) Which of the following are the physical processes responsible for the formation of Estuaries?

1. Rising sea level

2. Movement of sand and sandbars
3. Glacial processes
4. Tectonic processes

Select the appropriate code:

- a) 1 and 4 only
- b) 1, 3 and 4 only
- c) 1, 2 and 4 only
- d) All of the above

Q.18) Solution (d)

Estuaries and their surrounding wetlands are bodies of water usually found where rivers meet the sea. Estuaries are home to unique plant and animal communities that have adapted to brackish water—a mixture of fresh water draining from the land and salty seawater.

Most estuaries can be grouped into four geomorphic categories based on the physical processes responsible for their formation:

1. Rising sea level
2. Movement of sand and sandbars
3. Glacial processes
4. Tectonic processes

THINK!

- Indian Estuarine Ecosystem

Q.19) Consider the below statements in regard to plants found in Desert ecosystem:

1. Root system is not developed well and spread over small area to retain water.
2. Leaves are absent or reduced in size.
3. In some plants even the stem contains chlorophyll for photosynthesis.

Which of the statements given above is/are correct?

- a) 1 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

Q.19) Solution (c)

Deserts are formed in regions with less than 25 cm of annual rainfall, or sometimes in hot regions where there is more rainfall, but unevenly distributed in the annual cycle.

Plants in desert ecosystem adapt and conserve water by following methods:

- They are mostly shrubs.
- Leaves are absent or reduced in size.
- Leaves and stem are succulent and water storing.
- In some plants even the stem contains chlorophyll for photosynthesis.
- Root system is well developed and spread over large area.
- The annuals wherever present germinate, bloom and reproduce only during the short rainy season, and not in summer and winter.

THINK!

- Issues related to land degradation and desertification and how to address those issues.

Q.20) Consider the below statements and select the correct statement from the codes given below:

1. When succession is brought about by living inhabitants of that community itself, the process is called Autotrophic succession
2. When succession is brought about by outside forces is known as Allogenic succession.

Choose the correct answer:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.20) Solution (b)

Ecological succession is the process of change in the species structure of an ecological community over time. The time scale can be decades (for example, after a wildfire), or even millions of years after a mass extinction.

Autogenic and Allogenic Succession

- When succession is brought about by living inhabitants of that community itself, the process is called autogenic succession, while change brought about by outside forces is known as allogenic succession.

Autotrophic and Heterotrophic succession

- Succession in which, initially the green plants are much greater in quantity is known as autotrophic succession; and the ones in which the heterotrophs are greater in quantity is known as heterotrophic succession.

Q.21) Western Ghats has very rich biodiversity as compared to Eastern Ghats, because -

1. Western ghats are continuous mountains.
2. Western Ghats is area of high orographic precipitation.
3. Many major rivers have its source at Western Ghats.

Select the correct answer using the codes given below:

- a) 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Q.21) Solution (d)

Western Ghats are continuous mountains from south Kerala to Maharashtra. Its average height is also very high at more than 1000m. But Eastern Ghats is not that much continuous being split by many major rivers. Its average height is around 600m.

Usually more biodiversity is found in tropical rainforests which receives very heavy annual rainfall. During southwest monsoon Western Ghats acts as a barrier for the moisture winds from Arabian Sea causing very heavy rainfall. Hence Western Ghats is full of rainforests.

But Eastern Ghats is parallel to the north east monsoon winds. So rainfall is low compared to Western Ghats.

Southwest monsoon rainfall acts as source for many major rivers which makes it very fertile forming rainforests. These rainforests in Western Ghats acts as a home for more flora and fauna. This is the reason for more biodiversity in Western Ghats

Q.22) Consider the following statements with respect to 'North Natuna Sea'

1. Philippines renamed the part of South China Sea that falls under their claimed exclusive economic zone (EEZ) as 'North Natuna Sea'
2. Part of the 'North Natuna Sea' falls in China's nine-dash line

Select the correct statements

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

Q.22) Solution (b)

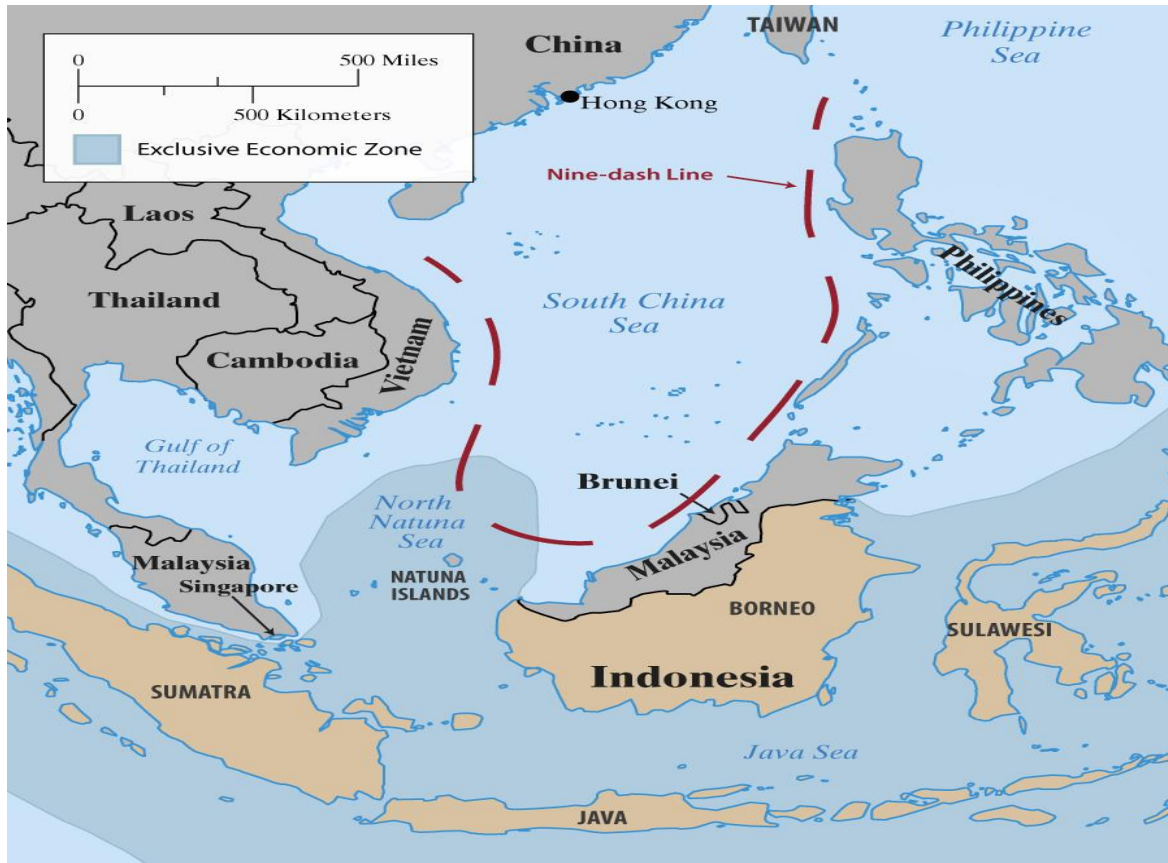
Indonesia renamed the waters northeast of the Natuna Islands, at the far southern end of the South China Sea, the 'North Natuna Sea'. Indonesia did not rename the entire South China Sea, only the part that falls under their claimed exclusive economic zone.

That exclusive economic zone (EEZ), however, overlaps with China's infamous nine-dash line.

Indonesia is not the first country to rename part of the South China Sea.

In 2011, the Philippines renamed the waters as the "West Philippine Sea"





Source: <http://www.thehindu.com/news/international/indonesia-renames-part-of-south-china-sea/article19288965.ece>

Q.23) Which of the following statements is correct about 'MUNTRA', developed by DRDO?

- a) It is an Air-Borne Telemetry Receiving System for down Range Applications
- b) It is a Main Battle Tank (MBT) developed in collaboration with Combat Vehicles Research and Development Establishment (CVRDE)
- c) It is India's first unmanned tank
- d) It is Light Combat Aircraft (LCA)

Q.23) Solution (c)

The Defence Research and Development Organisation (DRDO) has recently developed India's first unmanned tank "Muntra" that can remotely operate. The agency has developed the tank in three different variants to tackle any kind of situation – 'Muntra S' for surveillance missions, 'Muntra M' for mine detection and a third variant 'Muntra N' for reconnaissance in areas with nuclear and bio threats.

Source: <https://timesofindia.indiatimes.com/city/chennai/muntra-countrys-first-unmanned-vehicle-rolls-out-from-the-chennai-lab/articleshow/59817744.cms>

Q.24) Which of the following is aimed at improving the WASH services?

1. Jalmani
2. Swachh Bharat Abhiyan
3. National Rurban Mission

Select the correct statements

- a) 1 and 2
- b) 2 Only
- c) 2 and 3
- d) All of the above

Q.24) Solution (d)

WASH stands for "Water, Sanitation and Hygiene"

National Rurban Mission - talks about 24x7 piped water supply and Sanitation

Jalmani - To supplement NRDWP to ensure good quality safe drinking water by installing standalone purification systems, esp. in schools

Swachh Bharat Abhiyan - To clean up the streets, roads and infrastructure of India's cities, smaller towns, and rural areas

Source: <http://www.livemint.com/Politics/A5mSEeFG9QokP8LiPmaLcN/NSSO-to-conduct-survey-on-drinking-water-sanitation-hygiene.html>

Q.25) 'Tiwa' tribe is found in which of the following states?

- a) Meghalaya
- b) Tripura
- c) Odisha
- d) Both (a) and (b)

Q.25) Solution (a)

Tiwa is an indigenous tribal community inhabiting the states of Assam and Meghalaya (main region) and also found in some parts of Arunachal Pradesh and Manipur in Northeast India. They are recognized as a Scheduled tribe within the State of Assam. They are known as Lalungs.

Panthai Langa is a ritual related with agriculture which is organised to worship the deities of nature.

THINK!

- Wanchuwa festival

Source: <http://www.thehindu.com/todays-paper/welcoming-harvest/article19274686.ece>

Q.26) Which of the following pairs is/are correctly matched?

World Heritage Site	Country
1. Okinoshima	Japan
2. Sambor Prei Kuk	Cambodia
3. Valongo wharf	Spain

Select the correct code:

- 1 and 2
- 1 Only
- 1 and 3
- All of the above

Q.23) Solution (a)

Okinoshima - Japan

Sambor Prei Kuk - Cambodia

Valongo wharf – Brazil

Read More (UNESCO World Heritage Centre - New Inscribed Properties (2017) -
<http://whc.unesco.org/en/newproperties/>

Source:

1. <http://www.thehindu.com/news/international/japans-men-only-island-gets-unesco-heritage-tag/article19253112.ece>
2. <http://www.thehindu.com/news/international/another-feather-in-cambodias-cap/article19245738.ece>
3. <http://www.thehindu.com/todays-paper/tp-in-school/valongo-wharf-gets-unesco-heritage-status/article19255007.ece>

